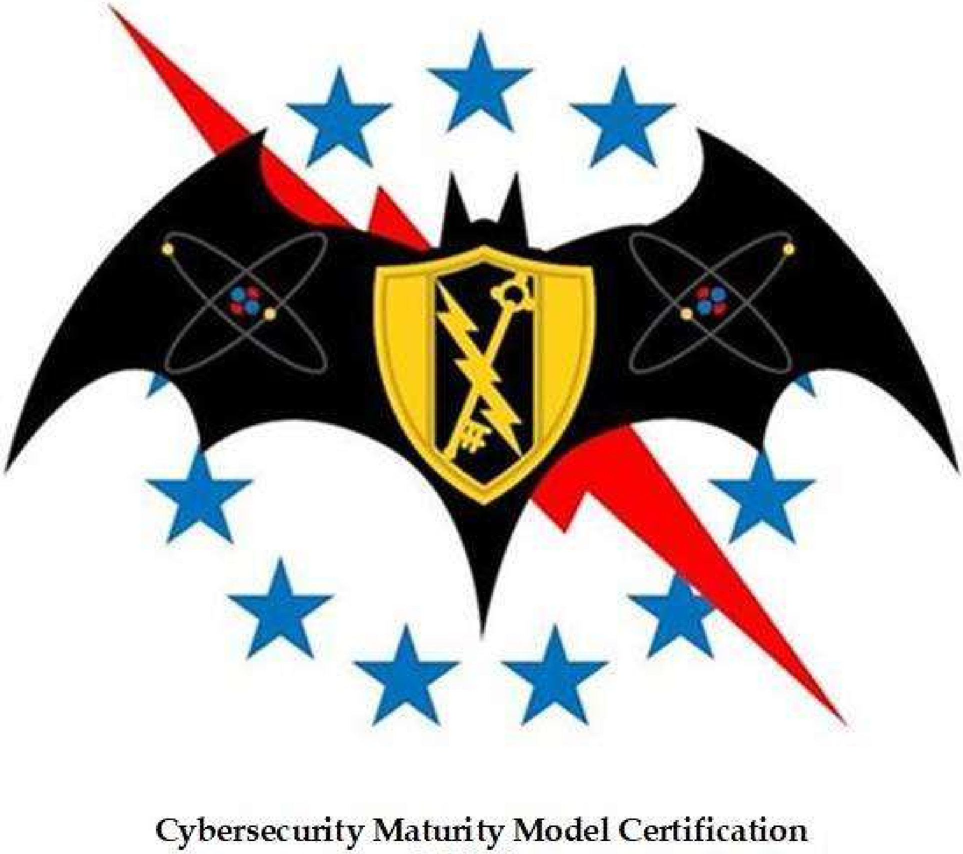
MARCO Federal Managed Computer Services



Cybersecurity Maturity Model Certification Initiative

Incident Response Policy

Document No

MOJVII-308-00

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Scope

Information Security Policies are the foundation for information technology security at MARCO-ONOPA JVII (MOJVII). The policies set out the information security standards required by NIST 800-171, which directs the Chief Information Officer (CIO) to establish a set of standards for information technology security to maximize the functionality, security, and interoperability of the distributed information technology assets, including, but not limited to, data classification and management, communications, and encryption technologies. This policy covers all information and information systems to include those used, managed, or operated by a contractor, an MOJVII, or other organization on behalf of the. This policy applies to all employees, contractors, and all other users of information and information systems that support the operation and assets of the. This is a living document subject to change in accordance with NIST SP 800-53 and CMMC v 1.02

Responsibilities

All covered personnel who utilize MOJVII IT resources are responsible for adhering to this policy and with any local Incident Response requirements based on their assigned responsibilities defined below.

	information security incidents must be handled with the involvement and cooperation of MOJVII IT.
Local Incident Response Coordinator	Reporting to the IRM, the Local Incident Response Coordinator (LIRC) is the MOJVII Security Liaison. This person is recognized as the local IR leader and can direct efforts of the local incident responders during an incident and provide status updates to the IRM
Incident Responders	Reporting to the IRM or the LIRC during an incident depending on their location, these technical experts are identified and called upon to assist in the remediation and resolution of a given incident.
Covered Personnel	Covered personnel have the responsibility to report information technology security incidents, software errors or weaknesses to MOJVII management in accordance with statewide information security standards and MOJVII standards, policies, and procedures. The notification shall be made as soon as possible after the weakness is discovered.
Third Parties	Third party service providers must provide Incident Response plans and capabilities that meet State requirements. Third parties are required to maintain and update their plans on an annual basis or when there is a change in business requirements. Incident Response plans are subject to periodic review of incident response controls by MOJVII.

IR-1 - Policy

All MOJVII information assets must meet the required security controls defined in this policy document that are based on the National Institute of Standards and Technology (NIST) SP 800-53, Security and Privacy Controls. This document addresses the requirements set forth by MOJVII to implement the family of Incident Response security controls. This policy provides requirements for the incident response process which is required to assure that information systems are designed and configured using controls sufficient to safeguard MOJVII's information systems. The requirements described in this Incident Response policy are designed to help MOJVII respond to and minimize the impact of cybersecurity incidents of information systems and data of which MOJVII is considered the owner. MOJVII has adopted the Incident Response principles established.

Responsibilities.

All covered personnel who utilize State of NC IT resources are responsible for adhering to this policy and with any local Incident Response requirements based on their assigned responsibilities defined below.

Role	Definition
MOJVII Management	MOJVII Chief Information Officer (SCIO), MOJVII Chief Information Officer (CIO), Chief Information Security Officer (CISO), or other designated MOJVII officials at the senior leadership level are assigned the responsibility for the continued development, implemen operation and monitoring of the Incident Response program.
Incident Response Officer	The Incident Response Officer (IRO) is a senior or executive level individual such as the CISO, CIO or MOJVII Security Liaison who is accountable for the actions of the IR team and the IR function.
Incident Response Manager	Reporting to the IRO, the Incident Response Manager (IRM) is responsible for leading the efforts of the Incident Response Team (IRT) and coordinates activities between all its respective groups. The IRM is responsible for activating the IRT team and managing all parts of the IR process, from discovery, assessment, remediation and finally resolution. This role typically resides with the Enterprise Security and Risk Management Office (ESRMO).
Incident Response Team (IRT)	Reporting to the IRM, the IRT is comprised of representatives from IT, Security, Application Support and other business areas. Members of a IRT are responsible for providing accelerated problem notification, containment, and recovery services in the event of computer security related emergencies, such as virus infections, unauthorized. access, or other events that may compromise production systems or information. All information security incidents must be handled with the involvement and cooperation of MOJVII IT..
Local Incident Response Coordinator	Reporting to the IRM, the Local Incident Response Coordinator (LIRC) is the Agency Security Liaison. This person is recognized as the local IR leader and is able to direct efforts of the local incident responders during an incident and provide status updates to the IRM
Incident Responders	Reporting to the IRM or the LIRC during an incident depending on their location, these technical experts are identified and called upon to assist in the remediation and resolution of a given incident.
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MOJVII has adopted the Incident Response principles established in NIST SP 800-53, "Incident Response" control guidelines as the official policy for this security domain. The "IR" designator identified in each control represents the NIST-specified identifier for the Incident Response control family. The following subsections in this document outline the Incident Response requirements that MOJVII must implement and maintain to be compliant with this policy. This policy shall be reviewed annually, at a minimum.

IR-2 - Incident Response Plan Training

MOJVII must train personnel with access to the MOJVII network in their incident response roles. The MOJVII must provide incident response training to information system users consistent with assigned roles and responsibilities. MOJVII shall do the following:

a. Provide training prior to assuming an incident response role or responsibility, when required by information system changes, and annually thereafter.

b. Provide additional or supplemental IR training when information system changes occur.

c. Include user incident response training regarding the identification and reporting of suspicious activities, both from external and internal sources.

d. Maintain a comprehensive record of all IR related training. The electronic log shall include names of participants, information system name(s), type of training, and date of completion. Log entries shall be maintained by the MOJVII Security Liaison or designee.

IR-3 - Incident Response Plan Testing

All MOJVII incident response personnel and service providers must perform the following testing:

a. Identify essential missions and business functions and associated incident response requirements.

b. MOJVII must perform tabletop exercises using scenarios that include a breach of restricted or highly restricted data and should test the MOJVII's incident response policies and procedures.

c. A subset of all employees and contractors with access to restricted or highly restricted data must be included in tabletop exercises.

d. Each tabletop exercise must produce an after-action report to improve existing processes, procedures, and policies.

e. MOJVII entrusted with restricted or highly restricted data must test the incident response capability at least annually.

f. For systems that store, process or transmit federal tax information (FTI), see Section 10.3, Incident Response Procedures in IRS 1075, for specific instructions on incident response requirements.

IR-3 (2) - Incident Response Plan Testing – Coordination With Related Plans (Moderate Control)

The MOJVII shall coordinate incident response testing with MOJVII elements responsible for related plans. MOJVII plans related to incident response testing include, for example, Business Continuity Plans, Disaster Recovery Plans, Continuity of Operations Plans (COOP), Crisis Communications Plans, Critical Infrastructure Plans, and Occupant Emergency Plans.

IR-4 – Incident Handling

MOJVII shall protect technology resources by conducting proper investigations:

a. The IRM, acting on behalf of the SCIO, shall evaluate the proper response to all information technology security incidents reported to the MOJVII.

b. The IRM shall work with MOJVII to decide what resources, including law enforcement, are required to best respond to and mitigate the incident.

c. After the initial reporting and/or notification, MOJVII management shall review and reassess the level of impact that the incident created.

d. The IRM shall coordinate incident handling activities with contingency planning activities.

e. An investigation into an information technology security incident must identify its cause, if possible, and appraise its impact on systems and data. The extent of damage must be determined and course of action planned and communicated to the appropriate parties.

f. MOJVII shall investigate information system failures to determine whether the failure was caused by malicious activity or by some other means (i.e., hardware or software failure).

g. If any suspicious activities are detected, responsible personnel within the affected MOJVII shall be notified to ensure that proper action is taken.

h. MOJVII shall establish controls to protect data integrity and confidentiality during investigations of information technology security incidents. Controls shall either include dual-control procedures or segregation of duties to ensure fraudulent activities requiring collusion do not occur.

i. Evidence of or relating to an information technology security breach shall be collected and preserved in a manner that is in accordance with State and federal requirements.

j. The collection process shall include a document trail, the chain of custody for items collected, and logs of all evidence-collecting activities to ensure the evidence is properly preserved for any legal actions that may ensue because of the incident.

k. Any system, network, or security administrator who observes an intruder on MOJVII network or system shall take appropriate action to terminate the intruder’s access. (Intruder can mean a hacker, botnet, malware, etc.)

l. In the event of an active incident, MOJVII management has the authority to decide whether to continue collecting evidence or to restrict physical and logical access to the system involved in the incident. Note: It may be necessary to isolated from the network until the extent of the damage can be assessed.

m. When dealing with a suspected incident, MOJVII shall do the following:
   i. Make an image of the system (including volatile memory, if possible) so that original evidence may be preserved.
   ii. Make copies of all audit trail information such as system logs, network connections (including IP addresses, TCP/UDP ports, length, and number), super user history files, etc.
   iii. Take steps to preserve and secure the trail of evidence.

n. The MOJVII's CIO or his/her designee will determine if other MOJVII, departments, or personnel need to become involved in resolution of the incident. MOJVII shall consider coordinating IR activities with external organizations, such as the OSA, OSHR, SBI, or the FBI.

o. MOJVII shall require all personnel directly involved with incident handling to have signed a Non-Disclosure Agreement (NDA).

p. MOJVII shall discuss incident details only on a need-to-know basis with authorized personnel.

q. When responding to a malware threat, MOJVII shall perform the following tasks:
   i. Verify threats to rule out the possibility of a hoax before notifying others.
   ii. Identify personnel responsible for mitigation of malware threats.
   iii. Have internal escalation procedures and severity levels.
   iv. Have processes to identify, contain, eradicate, and recover from malware events.
   v. Have a contact list of antivirus software vendors.

r. MOJVII may utilize the following for guidance regarding incident handling:
   i. NIST SP 800-36, Guide to Selecting Information Technology Security Products.
   ii. NIST SP 800-61, Computer Security Incident Handling Guide, Revision 2.
   iii. NIST SP 800-83, Guide to Malware Prevention and Incident Handling for Desktops and Laptops, Revision 1.
   iv. NIST SP 800-86, Guide for Integrating Forensic Techniques into Incident Response.
   v. NIST SP 800-92, Guide to Information Security Log Management.
   vi. NIST SP 800-94, Guide to Intrusion Detection and Prevention Systems (IDPS);
   vii. NIST SP 800-101, Guidelines on Mobile Device Forensics, Revision 1; and
   viii. Other appropriate guidance, as necessary.

s. MOJVII shall activate and implement a security incident handling capability during all stages of the NIST incident response life cycle (See Figure 1), including the following:
   i. Preparation
   ii. Detection and Analysis
   iii. Containment, Eradication, and Recovery
   iv. Post-Incident Activities

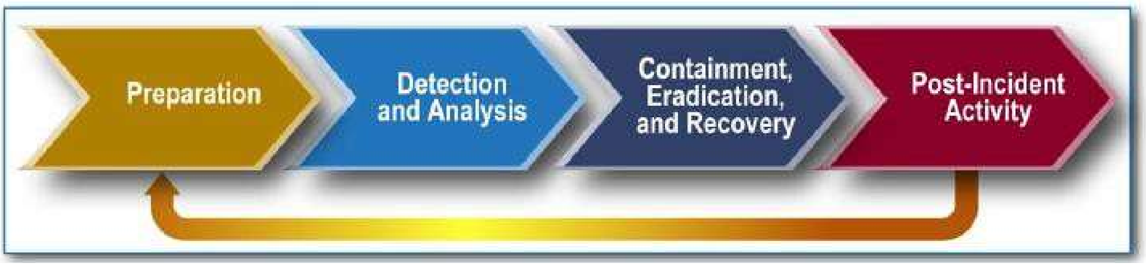

Figure 1

t. All MOJVII shall ensure the integrity of information systems incident investigations byhaving the records of such investigations audited by qualified individuals as determined by MOJVII management.

u. All MOJVII shall maintain records of information security breaches and the remedies used for resolution as references for evaluating any future security breaches. The information shall be logged and maintained in such a location that it cannot be altered by others. The recorded events shall be studied and reviewed regularly as a reminder of the lessons learned.

v. The MOJVII/department IT manager and/or incident response coordinator shall determine the criticality of an incident (see IR-6 for severity levels).

w. MOJVII shall enact automated processes for the purpose of correlating security events, e.g. Security Information and Event Management (SIEM) technology.

x. Lessons learned from incident handling activities shall be incorporated into incident response procedures, training, and testing/exercises, and implements the resulting changes.

y. MOJVII shall create processes to provide information for the enhancement of organizational and MOJVII information security awareness programs and incident response programs.

IR-5 - Incident Monitoring

Maintaining records about each information system incident, the status of the incident, and other pertinent information is necessary for forensics, evaluating incident details, trends, and handling. Incident information can be obtained from a variety of sources including, for example, incident reports, incident response teams, audit monitoring, network monitoring, physical access monitoring, and user/administrator reports.

a. MOJVII shall track and document information system security incidents potentially affecting the confidentiality of all other restricted and highly restricted data.

b. If the incident is rated a severity 3 or higher (see IR-6 for severity levels), subsequent reports to MOJVII management shall be provided.

c. MOJVII shall monitor and control the release of confidential security information during a security incident or investigation to ensure that only appropriate individuals have access to the information, such as law enforcement officials, legal counsel, or human resources.

d. A follow-up report shall be submitted to MOJVII management upon resolution by those directly involved in addressing the incident and contain the following:

   i. Point of contact.

   ii. Affected systems and locations.

   iii. System description, including hardware, operating system, and application software.

iv. Type of information processed.

v. Incident description

vi. Incident resolution status

vii. Damage assessment, including any data loss or corruption.

viii. Organizations contacted.

ix. Corrective actions taken.

x. Lessons Learned

IR-6 - Incident Reporting

To increase effectiveness in assessing threat levels and detecting patterns or trends regarding information technology security incidents through proper documentation all computer security incidents. Security incidents, for example, suspicious events (e.g. insider threat), software errors or weaknesses, system vulnerabilities associated with security incidents (e.g. Ransomware), and lost or stolen MOJVII computer equipment, shall be reported *immediately* to the MOJVII management.

a. MOJVII and vendors of MOJVII shall ensure all suspected security incidents or security breaches are reported to the IASO within twenty-four (24) hours of incident confirmation, as required by NIST SP 800-171. Incidents shall be reported to the IASO by one of the following methods:

   i. Contact DIT Customer Support Center 915-504-1323

   ii. Use the incident reporting website.

   iii. Contact a member of the IASO staff directly by phone or email itdept@onopa.com.; anthony@marcofederal.com

b. Contracts involving the storage and/or processing of MOJVII data shall identify the vendor's security point of contact (PoC).

c. For incidents involving FTI, MOJVII shall contact the appropriate special agent-in-charge, TIGTA, and the IRS Office of Safeguards *immediately* but no later than 24 hours after identification of a possible issue involving FTI. Refer to IRS 1075 Section 10.0, Reporting Improper Inspections or Disclosures, for more information on incident reporting requirements.

d. For reporting security incidents to outside authorities, MOJVII shall do the following:

   i. MOJVII shall coordinate with FBI CYBER in accordance with MOJVII's Incident Response Plan, applicable state laws, procedures, and agreements that require reporting to the Department of Justice, the Federal Bureau of Investigation, and the Auditor. MOJVII shall report all security incidents to the ESRMO when reported to an outside entity.

   ii. MOJVII shall notify the Social Security Administration (SSA) Regional Office and their SSA Systems Security Contact within one (1) hour of suspecting loss if a privacy or security incident involves the unauthorized disclosure of Social Security data. If the security incident is related to MOJVII Transmission/Transfer Component (STC) and the MOJVII is unable to notify the SSA Regional Office or the SSA Systems Security Contact within 1 hour, the STC must report the incident by contacting SSA's. Refer to MOJVIIwide Privacy Policy, 318-00, for additional guidance.

iii. If a security incident involves the possible breach of bank account, the MOJVII must contact the appropriate special agent-in-charge, FBI CYBER immediately, but no later than twenty-four (24) hours after identification.

iv. MOJVII shall notify consumers in the event of a security breach resulting in the unauthorized release of unencrypted or un-redacted records or data containing personal information with corresponding names. **Note**: The acquisition of encrypted data is only a breach if a confidential process or key needed to unlock the data is also breached, or if the data is encrypted by an unauthorized or malicious process, such as ransomware.

v. The MOJVII CIO and/or his/her designee shall manage the dissemination of incident information to other participants, for example law enforcement or the press. Public release of information concerning a security incident shall be coordinated through the MOJVII's CIO, the Incident Response Team (IRT), and the MOJVII's Public Information Officer (PIO).

e. Information recorded about information technology security breaches shall cover the following at a minimum:

i. Identify the current level of impact on MOJVII functions or services (Functional Impact).

ii. Identify the type of information lost, compromised, or corrupted (Information Impact).

iii. Estimate the scope of time and resources needed to recover from the incident (Recoverability).

iv. Identify when the activity was first detected and when corrective actions were implemented.

v. Identify the number of systems, records, and users impacted.

vi. Identify the network location of the observed activity.

vii. Identify point of contact information for additional follow-up.

viii. Identify the attack vector(s) that led to the incident.

ix. The method of breach detection and incident response actions

x. Provide any indicators of compromise, including signatures or detection measures developed in relationship to the incident.

xi. Provide any mitigation activities undertaken in response to the incident.

Incident Severity Levels

The Incident Response Manager (IRM) is responsible for initially assessing an incident's impact and assigning a severity to the incident. This initial severity assignment dictates the level of response to the incident. As response to the incident progresses, it may be determined that the incident is more (or less) severe than originally realized, and a new severity level assigned. Security incidents are divided into five levels of severity based on their potential to negatively impact MOJVII operations, finances, and/or reputation. The characteristics in the table below should be used as baseline severity levels and may include additional threats categories.

Incident Severity	Incident Characteristics

5 GENERAL ATTACK(S) SEVERE	• Potential for or actual loss of lives or significant impact on the health or economic safety of MOJVII • Significant risk of negative financial or public relations impact • Loss of critical supervisory control and data acquisition (SCADA) systems • Successful penetration or denial-of-service attack(s) detected with significant impact on MOJVII network operations: • Very successful, difficult to control or counteract. • Large number of systems compromised. • Significant loss of confidential data • Complete network failures • Mission-critical system or application failures • Compromise or loss of administrative controls of critical system
4 LIMITED ATTACK(S) HIGH	• Low risk of negative financial or public relations impact • Widespread instances of a computer virus or worm that cannot be handled by deployed anti-virus software. • A critical vulnerability is discovered but no exploits are reported. • A critical vulnerability is being exploited but there has been no significant impact. • Penetration or denial-of-service attack(s) detected with limited impact on MOJVII network operations: • There are credible warnings of increased probes or scans. • Minimally successful, easy to control or counteract. • Small number of systems compromised. • Little or no loss of confidential data • No loss of mission-critical systems or applications • A compromise of non-critical system(s) did not result in loss of data

3 SPECIFIC RISK OF ATTACK ELEVATED	• An exploit for a critical vulnerability exists that has the potential for significant damage. • A critical vulnerability is being exploited and there has been a moderate impact. • There is a compromise of a secure or critical system(s) containing sensitive information. • There is a compromise of a critical system(s) containing non-sensitive information, if appropriate • Widespread instances of a known computer virus or worm easily handled by deployed anti-virus software. • Isolated instances of a new computer virus or worm that cannot be handled by • deployed anti-virus software. • There is a distributed denial of service attack. • Significant level of network probes, scans and similar activities detected indicating a pattern of concentrated reconnaissance
2 **INCREASED RISK OF ATTACK GUARDED**	• A critical vulnerability is discovered but no exploits are reported. • A critical vulnerability is being exploited but there has been no significant impact. • A new virus is discovered with the potential to spread quickly. • There are credible warnings of increased probes or scans. • A compromise of non-critical system(s) did not result in loss of data. • Small numbers of system probes, scans, and similar activities detected on internal systems. • External penetration or denial of service attack(s) attempted with no impact to MOJVII network operations. • Intelligence received concerning threats to which State systems may be vulnerable
1 **LOW**	• Small numbers of system probes, scans, and similar activities detected on internal and external systems. • Isolated instances of known computer viruses or worms easily handled by deployed anti- virus software. • Unsubstantiated or inconsequential event

IR-7 - Incident Response Assistance

The ESRMO shall provide incident response support that offers advice and assistance to users of State and MOJVII managed information systems for the handling and reporting of security incidents. These resources may include digital forensic services, vulnerability assessments, and incident response capability. MOJVII shall establish and maintain a cooperative relationship between its IR capability and MOJVII's IR capability, and other external, key providers of information systems.

IR-8 - Incident Response Plan

MOJVII missions, business functions, strategies, goals, and objectives for incident response help to determine the structure of incident response capabilities. All MOJVII Incident Response plans must include the following requirements:

a. Provides the MOJVII with a roadmap for implementing its incident response capability,

b. Describes the structure and organization of the incident response capability,

c. Provides a high-level approach for how the incident response capability fits into the overall MOJVII,

d. Meets the unique requirements of the MOJVII, which relate to mission, size, structure, and functions,

e. Defines reportable incidents,

f. Provides steps to be taken within the security incident response plan during and after cyberattacks,

g. Provides metrics for measuring the incident response capability within the MOJVII by incident response management function:

    i. Common organizational interfaces: e.g. communications, work coordination

    ii. Protect: e.g. risk assessment, malware protection, vulnerability management

    iii. Detect: e.g. network security monitoring and alerting

    iv. Respond: e.g. incident reporting, incident response, incident analysis

    v. Sustain: e.g. MOUs and contracts, program management, security administration

h. Defines the resources and management support needed to effectively maintain and mature an incident response capability,

i. Be reviewed and approved by MOJVII officials annually, at a minimum,

j. Be revised as needed to address system/MOJVII changes or problems encountered during plan implementation, execution, or testing,

k. Incident response plan changes must be communicated to identified State and MOJVII officials,

l. Incident response plans must be distributed to MOJVII identified incident response personnel,

m. Protect the incident response plan from unauthorized disclosure and modification.

IR-9 - Incident Spillage Response (Optional Control)

This control is optional for LOW and MODERATE risk information systems.

For incident spillage involving FTI, MOJVII shall refer to IRS 1075 for additional guidance.

IR-10 - Integrated Information Security Analysis Team (Optional Control)

This control is optional for LOW and MODERATE risk information systems.

Enforcement

Violations of this policy or failure to implement provisions of this policy may result in disciplinary action up to and including termination, civil litigation, and/or criminal prosecution.

Material Superseded

This current policy supersedes all previous versions of the policy. All MOJVII and vendors of MOJVII are expected to comply with the current implemented version of this policy.

APPROVAL SIGNATURES PAGE
Information Technology Department (ITDEPT)

MOJVII OFFICERS	SIGNATURE	DATE
CIO		
CSO		
CEO		
IASO:		